

What is Broadband?



- High speed communications transmitting large amounts of data, such as work files, videos, music, photos, graphics, x-rays, etc, over an array of networks (including the Internet) and using multiple technologies.
- Delivered through 'pipes' such as cable, copper, fiber optics, and wireless.
- FCC defined as at least 200kbps in one direction.

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What's the Value ?



- Productivity is greatly enhanced with faster speeds.
 - Time is \$\$\$
- To download three 70-page documents from the Internet
 - Dialup = 1 1/2 hours
 - DSL = 10 to 52 seconds
 - T-3 = instantaneous

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Service	Bandwidth	Usage	Hardware	Price/month
T – 3	3.0 – 45 Mb/s	Web hosting, secure connectivity, medical imaging	MUX \$700 - \$2200	\$3500 per month
Wireless: Wi – Fi Fixed	11 Mb/s 1.2 Mb/s	Dynamic IP addresses, multiple users, heavy Internet traffic,	Base station - \$175 & antenna - \$50 Dish	\$45 – 400 per month
Cable Modem	5 Mb/s	Dynamic IP addresses, multiple users, heavy Internet traffic, music, video	Modem - \$100	\$30 - \$50 per month plus cable service
T – 1	1.5 Mb/s	Dedicated access, virtual private network, static IP, 20 or more users	Router	\$450 - \$1000 per month + mileage
DSL	144 kb/s – 1.1 Mb/s	Dynamic IP addresses, multiple users, heavy Internet traffic	Modem	\$60 - \$150 per month
Satellite	500 kb/s	Multiple users, medium Internet traffic	Dish	\$100 per month

DSL	A broadband connection using telephone infrastructure with limited availability due to distance, capacity, and technology. Distance usually 3 miles from Central Office.
Cable	A broadband connection using cable television infrastructure with limited availability due to distance, capacity and technology. Must pay for cable service and Internet service.
Wireless	A broadband connection using airwaves, antennas, towers and receivers with limited availability due to distance and technology.
T – 1	Broadband connectivity up to 1.5 Mb/s with wide availability and support, although its greater complexity and expense limits its use in smaller organizations.
T – 3	Broadband connectivity up to 45 Mb/s with wide availability and support, although its greater complexity and expense limits its use in smaller organizations.



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The National Picture and the State of Broadband



- According to an AeA Study released in May 2003: "Maryland's broadband subscriptions jumped substantially over the last two years," **said Greg Poersch, Executive Director, AeA's Potomac Council.** "Nonetheless, there is still substantial room for improvement. Maryland's broadband subscription growth rate is one of the lowest in the country. Broadband services are important because as broadband subscriptions increase so will the productivity and competitiveness of the state economy."

http://www.aeanet.org/PressRoom/pret052203_Broadband2003Main.asp

- An extensive national study by TECHNET released in July 2003 ranked Maryland below 25th amongst states with a comprehensive policy towards broadband deployment. TECHNET rankings were weighted towards regulatory policy, and then supply-side and demand-side policies on a sliding scale.

http://www.technet.org/resources/State_Broadband_Index.pdf

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Opportunities with Broadband

Telework	Less congestion and better quality of life
Telemedicine	Better health care, less travel
Video Conferencing	Less travel, lower costs
Distance Learning	More educational opportunities

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Glossary of Terms

Access: The technology choices available by which users can connect to the public data network at the level they demand or need (dialup, cable, DSL, ISDN, wireless, etc.)

B2B (business-to-business): The exchange of products, services, or information between two or more businesses using networked technologies.

B2C (business-to-consumer): The exchange of products, services, or information between businesses and consumers over the Internet.

Bandwidth: The amount of data that can be transmitted in a given amount of time over a particular connection.

Broadband: High speed data transmission over which a single medium can carry several channels at once. DSL and cable modem service are broadband services.

Cable modem: A device that enables a personal computer to be connected to a local cable TV line and receive and send data.

Dialup access: Refers to connecting to the Internet via a modem and standard telephone line.

Distributed computing: An industry-standard software technology for setting up and managing computing and data exchange in a system of networked computers.

Domain name: The unique name that identifies an Internet site and its address.

DSL (Digital Subscriber Line): A technology which enables the ordinary copper component of telephone lines to carry data at rates much higher than ISDN.

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Glossary of Terms



E-commerce (Electronic commerce): Commercial and non-commercial transactions facilitated through the use of networked technologies.

EDI (Electronic Data Interchange): The transfer of data between companies using computer networks, such as the Internet.

Gbps (Gigabits per second): A measurement of the rate of speed at which data is transferred (e.g., 1 Gbps equals 1 billion bits per second).

Infrastructure: The communication networks that connect users to the Internet.

IT (Information technology): The broad subject concerned with all forms of technology used to manage and process information electronically.

ISDN (Integrated Services Digital Network): A service that allows for higher data transmission speeds and is capable of handling at least two services over one line simultaneously (i.e., voice and fax or voice and data).

ISP (Internet Service Provider): A company or organization that provides users with connectivity to the Internet.

Kbps (kilobits per second): The rate of speed at which data is transferred (e.g., 1 Kbps equals 1,000 bits per second).

LAN (Local Area Network): A network of interconnected workstations that share the resources of a single processor or server within a relatively small geographic area, such as an office.

Mbps (Megabits per second): A measurement of the rate of speed at which data is transferred (e.g., 1 Mbps equals 1 million bits per second).

M-commerce (Mobile E-commerce): Commercial and non-commercial transactions facilitated through the use of wireless networked devices. 7

Glossary of Terms



Privacy policy: A statement by an organization describing the ways in which it collects, stores, and uses personal information gathered from citizens and consumers.

Telecommunications: Refers to all types of data transmission, from voice to video.

Usage: The extent to which business, government and household users utilize the Internet access and infrastructure available to them.

Virtual private network: A private data network using the public telecommunication infrastructure with security procedures that maintain privacy.

WAN (Wide Area Network): A geographically dispersed telecommunications network.

Wireless access: A communications system in which radio-frequency or infrared waves carry a signal through the air, rather than along a wire.

World wide web: The system of Internet servers and users that support documents formatted in the HTML language.

xDSL (Digital Subscriber Lines): One of many variations of DSL, the most common of which is ADSL, asymmetric digital subscriber line service.

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